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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,513	06/27/2003	Yoshihiro Koyama	00862.023123	9866

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EXAMINER

JACYNA, J CASIMER

ART UNIT PAPER NUMBER

3751

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/607,513

Applicant(s)

KOYAMA ET AL.

Examiner

J. Casimer Jacyna

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. 10282003.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6 and 7-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Corso et al. Corso discloses a liquid discharge apparatus for an array of nozzles 250 as shown in figures 6A and 6B with the discharge amount being changed by changing the number of plumes being emitted from the nozzle (see col.22, lines 46-66) and a voltage control device that can change the voltage supplied to an individual nozzle in the nozzle array as disclosed on col. 21, lines 26-29 and 36-56. In regard to claims 8-14, Corso discloses an array of adjustable dispensing nozzles that are capable of performing the functions called for in claims 8-14 regardless of whether or not Corso specifically discloses the functions.

4. Claims 1-17 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Shigemura. Shigemura discloses a liquid discharge apparatus for an array of nozzles 108 as shown in figure 18 with the discharge amount being changed for each nozzle individually by applying a variable voltage to any one of heaters 102 as disclosed

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on paragraphs 125, 130 and 132. In regard to claims 16 and 17, Shigemura discloses the method steps of using a black matrix in paragraph 88 and electroluminescence in paragraph 2.

5. Claims 1-15, 18-20 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Komyoji et al. Komyoji discloses a liquid discharge apparatus for an array of nozzles 4 with the discharge amount being changed for each nozzle individually by applying a variable voltage to electrode 4d as disclosed on col. 11, lines 8-30. In regard to claims 18 and 19, Shigemura discloses the method steps of using a conductive thin film on col. 17, line 52.

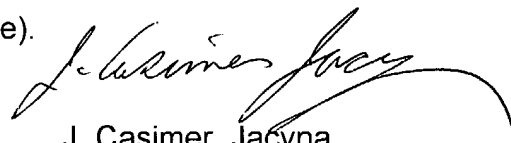
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Irinoda et al., Akahira, Shirota et al., and Tanaka teach other liquid discharge apparatus that supply a variable voltage to a nozzle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Casimer Jacyna whose telephone number is 703-308-1508. The examiner can normally be reached on Tue. thru Thu. 9AM-8PM, Fri. 7AM-1PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 703-308-2580. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Casimer Jacyna  
Primary Examiner  
Art Unit 3751

jcj